

## **ABSTRACT**

**[49]** A method and system for antenna selection diversity with dynamic gain control. A receiver selects a starting antenna and dwells on it until an incoming signal is detected. An AGC is applied on the received signal and an estimate of the received power is determined for the starting antenna. The receiver may dwell on other antennas if the signal in the first antenna is not strong enough for signal processing. The gain of an antenna may be set by the gain and power levels of the previously dwelled-on antennas and/or by a power coupling factor that exists between the antennas in an antenna switch. The receiver switches through the remaining antennas as long as necessary to select at least one of the antennas for signal processing. Dynamically adjusting the gain of antennas in a diversity system provides a more accurate and efficient antenna selection scheme.